Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

Embargo: 8 october 1991
11.00 GMT

Information Kit

Pochette d'information

Carpeta de información

World Health Organization
Organisation mondiale de la Santé
Organización Mundial de la Salud

United Nations Children's Fund
Fonds des Nations Unies pour l'Enfance
Fondo de las Naciones Unidas para la Infancia

27 September 1991

NOTE TO CORRESPONDENTS

We are pleased to provide you with the enclosed information kit to assist you in reporting on the achievement of the Universal Child Immunization goal of 80 percent coverage worldwide by the end of 1990. Please note that this material is embargoed and not for release before 11.00 GMT on 8 October 1991.

This achievement will be officially certified by the Secretary-General of the United Nations, Mr Javier Pérez de Cuéllar at a ceremony in the Trusteeship Council Chamber of the United Nations in New York on Tuesday 8 October, in the presence of the Director-General of the World Health Organization, Dr Hiroshi Nakajima, and the Executive Director of the United Nations Children's Fund, Mr James P. Grant.

The goal of providing immunization for all children by 1990 was adopted by the World Health Assembly in 1977. Six diseases -- measles, whooping cough, tetanus, poliomyelitis, tuberculosis and diptheria -- that killed or disabled some 10 million children annually became the target of the Expanded Programme on Immunization in which WHO, UNICEF and many other organizations in almost every country in the world collaborated.

We hope this kit will help you in your coverage of this event. For further information on the ceremony, or on the Expanded Programme on Immunization and Universal Child Immunization, please contact the information offices of WHO and/or UNICEF.

Thank you.

World Health Organization
Office of Information

Thérèse Gastaut

UNICEF
Division of Information

Mehr Khan

READEX FICHE

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

CHILDHOOD IMMUNIZATION:
The success story of the last decade

A statement by Dr Hiroshi Nakajima, Director-General of WHO,
and Mr James P. Grant, Executive Director of UNICEF

Less than a decade ago, few could imagine that by 1990 80% of the world's children would be immunized against six leading childhood diseases. Today, we can announce that we have reached that goal, saving millions of young lives in a lasting accomplishment that will have an influence on the progress of humanity for decades to come.

In 1990, more than 100 million children in the developing world under the age of one year - on a global average 80% of all those born - were successfully immunized against measles, diphtheria, whooping cough, tetanus, poliomyelitis and tuberculosis - under the Expanded Programme on Immunization of the World Health Organization and UNICEF. The ultimate goal is universal childhood immunization.

A decade ago, the rate of vaccination was about 20%. It was still low in 1985 when, at a meeting commemorating the fortieth anniversary of the United Nations, the Secretary-General called for Universal Child Immunization, with a global target of 80% coverage of children under one year by 1990. Some 74 governments and more than 400 voluntary organizations supported the commitment. Now, with the achievement of the 80% goal, the lives of about 3 million children are being saved annually, which means one child about every 10 seconds.

Put simply, this accomplishment is the greatest public health success story of the past decade. It is one of the most significant examples of mobilizing people for a specific purpose ever undertaken. And the cost of the vaccines to accomplish this was less than $1 per child immunized.

For a child to complete successfully the primary immunization series requires five separate visits and administration of a total of eight doses of vaccine by health workers. That resulted in almost 500 million contacts in 1990. It is doubtful that any other service provided by governments to their citizens has reached so many people, so many times in such a limited period.

This is a truly remarkable feat. And yet, there is so much more to do.

Over 2 million children still die each year from the six diseases, some of which can be eradicated and all of which are preventable. In September 1990, the World Summit for Children, attended by 71 heads of state or government and leading representatives of 80 other countries, set a number of goals for the 1990s in the field of immunization. The goals include: the eradication of poliomyelitis by the year 2000; reduction by 95% in the number of deaths from measles, currently the largest killer of children among vaccine-preventable diseases, and the elimination of tetanus of the newborn, both by 1995; and achievement and maintenance of a 90% immunization rate for the six diseases for infants and for tetanus for women of childbearing age.

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Achievement of these goals could be expedited by developing improved vaccines which would immunize children against all the diseases with only one or two doses instead of the eight now required; and vaccines which could be given earlier, be stored for limited periods without refrigeration, be effective against more than one disease and be lower in cost. Scientists are already working towards these improvements, but a major infusion of funding would speed the process. New vaccines could also have significant application in the industrialized world, where immunization rates have sometimes fallen below those of some developing countries, resulting in new and dangerous outbreaks of measles, diphtheria and whooping cough in some countries.

The massive immunization programme has also brought many side benefits which should enhance the overall health of children. Vast improvements in public health facilities and practices in rural areas have allowed clinics to offer numerous other services to upgrade health care, such as education about oral rehydration therapy to help reduce the 3.2 million deaths a year from diarrhoea. The improved health facilities have also allowed health workers to increase the distribution of vitamin A to reduce mortality and prevent blindness, of iodine to curtail goitre and mental retardation, and of simple antibiotics to treat pneumonia and dysentery. In effect, health centres can now ride on the benefits from immunization programmes to provide better overall care for families.

This success should give us the confidence to be able to achieve other goals for children in this decade, set by the Summit, including sharp reductions in infant, child and maternal mortality and in the prevalence of malnutrition, and major improvements in access to safe drinking-water, to sanitation and to basic education.

Equally important has been the vast social mobilization undertaken to meet the 80% coverage target. There have been few, if any, times in history where so many people have agreed on a course of action and then set about so effectively to accomplish it. All levels of society were involved in this achievement, from governments, which launched accelerated immunization activities and provided funding, to nongovernmental organizations. This involvement ranges from Rotary International, which has pledged more than $200 million for the eradication of poliomyelitis, to efforts by rural villagers, who made certain that their infants were immunized at the appropriate time.

Buoyed by this success, we can certainly achieve the new immunization targets for the 1990s, which will stand as an example for the new millennium. It will show that, when people work together to achieve an agreed target for humanity, there is virtually no limit to what they can do. That is why we must continue to work together to sustain global support for childhood immunization, and commitment to accelerating and expanding immunization programmes.

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La immunización de los niños: un logro mundial

IMMUNIZING THE WORLD'S CHILDREN:
A Global Update

The Expanded Programme on Immunization (EPI) is a joint, global effort of the World Health Organization (WHO), its 168 Member States, the United Nations Children's Fund (UNICEF), other United Nations agencies, and others committed to provide immunization services to all the children of the world. The WHO Programme had its genesis in a Resolution of the World Health Assembly in 1974 arising from the successes of the Smallpox Eradication Programme. The ultimate aim of the Expanded Programme on Immunization is a world free of suffering, disability and death resulting from vaccine-preventable diseases.

The Problem:

* The Expanded Programme on Immunization seeks to immunize the world's children against six major diseases:

  - Measles
  - Poliomyelitis
  - Tuberculosis
  - Diphtheria
  - Pertussis (whooping cough), and
  - Tetanus

* As the decade of the 1990s begins, immunization has already achieved remarkable success in tackling these diseases. Immunization services which reached less than 5% of children in the developing world when the Expanded Programme on Immunization was established in 1974 are now reaching approximately 80% of the world's children under the age of one. Every minute, the protection provided by immunization saves six children from dying from these diseases. A total of 3.2 million deaths are being averted annually. At the present stage of immunization coverage, it is estimated that the Expanded Programme on Immunization currently prevents some 1.95 million deaths a year from measles, 699 000 deaths a year from neonatal tetanus, 580 000 deaths a year from pertussis and some 445 000 cases of poliomyelitis.

* Even so, the number of children dying from vaccine-preventable diseases requires urgent efforts to continue raising immunization coverage levels. An estimated 1.8 million children die each year due to vaccine-preventable disease, including 876 000 deaths from measles, 565 000 deaths from neonatal tetanus and 363 000 deaths from pertussis, as well as 119 000 preventable cases of paralytic poliomyelitis.

The goal of the Expanded Programme on Immunization

* The goal of the Expanded Programme on Immunization is to achieve universal childhood immunization.

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Benefits of universal childhood immunization

* Immunization is one of the most powerful and cost effective weapons of disease prevention, yet remains tragically under-utilized. In the developing world today, six children die and another six become disabled with each passing minute because of the lack of immunization. Diseases, such as neonatal tetanus and poliomyelitis, which have been virtually eliminated in most of the developed world, continue to take a horrible toll in the developing world.

* The Expanded Programme on Immunization provides benefits which can enhance the overall health of children. The programme has spawned vast improvements in public health facilities and practices in rural areas of the world. As a result, spin-offs of the Expanded Programme on Immunization include the establishment of clinics that can offer other services that can help upgrade general public health, including provision of oral rehydration therapy to help reduce the 4 million deaths a year from diarrhoea, distributing Vitamin A to prevent blindness, and providing iodine to curtail goitre and mental retardation. As a result, health centres can easily exploit the benefits of immunization services to provide better overall care for families.

* In the industrialized world, immunization can result in great savings in domestic spending, when diseases are eradicated and it is no longer necessary to vaccinate against them. For example, when polio is finally eradicated, the United States will save US$ 65 million annually in vaccine production alone. Dramatic reductions in communicable diseases will lead to less transmission of these diseases from one part of the world to another, thereby sparing both developed and developing countries from new infections.

Forging a global coalition

* The Expanded Programme on Immunization has stimulated the construction of a vast global mobilization. All levels of society are involved in immunization programmes: governments; Ministries of Health; intergovernmental organizations such as WHO, UNICEF, the United Nations Development Programme (UNDP), the World Bank and others, nongovernmental organizations such as Rotary International and the Rockefeller Foundation; and rural villagers who have mobilized to guarantee that their infants receive immunization at the appropriate time. Hundreds of millions of people have participated in this global mobilization.

Challenges for the 1990s

* In 1988 and 1989, the WHO World Health Assembly and the UNICEF Executive Board added four new goals for the Expanded Programme on Immunization for the decade of the 1990s:

- Elimination of newborn tetanus worldwide by the year 1995;
- Reduction of measles deaths by 95 and cases by 90% by the year 1995;
- Eradication of poliomyelitis worldwide by the year 2000;
- Achieving and sustaining at least 90% immunization coverage by the year 2000.

./.

* Structurally, the Expanded Programme on Immunization will seek the following changes during the 1990s:

o Disease surveillance will be improved: Progress will be measured and resources directed to the areas that need them most;

o New vaccines must be added: The Declaration of the Children's Vaccine Initiative meeting held in New York city on 10 September 1990 said that universal immunization will be facilitated by accelerating the application of current science to make new and better vaccines, benefiting children in all countries. These include vaccines which:

- o Require one or two rather than multiple doses;
- o Can be given earlier in life;
- o Can be combined in novel ways, reducing the number of injections or visits required:
- o Are more heat stable, retaining potency during transport and storage, particularly at tropical temperatures;
- o Are effective against a wide variety of disease not currently targeted by immunization but which take a heavy toll of preventable deaths, including AIDS, acute respiratory infections, diarrhoeas, and important parasites; and
- o Are affordable.

* Work on vaccines themselves must be accompanied by investments which bring them rapidly into large scale and inexpensive production and effective use. Such investments are needed to simplify "production and quality control methods; to support field trials; to speed licensing; to develop approaches -- including production in developing countries -- which assure that vaccines are available for all; to simplify the logistics of storing, transporting and administering vaccine; and to strengthen national epidemiological and applied research capacities, especially in developing countries, so that each vaccine is used to best advantage".

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

QUESTIONS & ANSWERS ABOUT THE EXPANDED PROGRAMME ON IMMUNIZATION

Question 1: What is the Expanded Programme on Immunization?

The Expanded Programme on Immunization (EPI) is a global effort of governments, WHO, UNICEF, other United Nations agencies, bilateral development agencies, and nongovernmental organizations to provide immunization services for all children to prevent suffering, disability and death due to six vaccine-preventable diseases. They are measles, diphtheria, whooping cough, tetanus, tuberculosis and poliomyelitis.

Question 2: What are the goal and targets of the EPI?

The goal of the EPI is to achieve universal child immunization. The target for 1990 was to achieve 80% immunization coverage of children by their first birthday in the developing world. The target for the year 2000 is 90%. Other goals set by WHO and UNICEF and endorsed by the World Summit for Children in September 1990 are: the eradication of poliomyelitis by the year 2000; the elimination of tetanus of the new-born by 1995; and the reduction by 95% in deaths and 90% in number of cases of measles by 1995 compared with levels in the mid-1970's when the EPI was launched.

Question 3: What is the importance of the Expanded Programme on Immunization?

Immunization is one of the most cost-effective weapons that we have to protect children against vaccine-preventable diseases. Without immunizations, over 5 million children would die every year due to these diseases. It is estimated that at the current levels of immunization coverage, about 3.2 million deaths are prevented each year. However, more than 1.8 million children still die annually from the diseases and there are some 120 000 cases of paralytic poliomyelitis. The challenge is to reduce these vaccine-preventable diseases to a level where they cease to be public health problems.

Question 4: What other challenges are there besides disease control and immunization coverage levels?

The World Health Assembly has noted a number of other challenges in the 1990s. They include: improving disease surveillance to monitor progress and to help direct programme resources to the areas of greatest need; introducing new and improved vaccines; using the EPI delivery system to promote other primary health care practices, such as oral rehydration therapy to reduce deaths resulting from diarrhoea; and conducting research and development activities to meet these challenges.

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Question 5: What does the programme cost and where will the money come from?

It costs US$ 10-15 to immunize a child with the vaccines currently used in the programme. With more than 100 million children born each year in the developing world, that means that it will cost about US$ 1.5 billion a year to fully immunize all these children. Under the ongoing programme, some two thirds of the funding has been coming from the developing countries where the immunization programmes are operating, with the remainder being provided by donors. The donor amount is about the cost of two Boeing 747 airliners. In addition, extra resources will be needed to control outbreaks of the diseases and to improve sanitary conditions for deliveries of infants to eliminate tetanus among the new-born.

Question 6: What is the benefit to industrialized countries of supporting EPI?

The Expanded Programme on Immunization is worthy of support from the industrialized world not only from the humanitarian aspect of reducing the needless suffering, disability and death of children in the developing world, but also because it benefits the industrialized countries. For example, US$ 65 million is spent annually in the United States on poliomyelitis vaccines. Eradication of poliomyelitis would end the need for poliomyelitis immunization, saving significant amounts in all countries, similar to savings achieved when smallpox was eradicated.

Question 7: What is being done to improve and develop new vaccines?

The Children's Vaccine Initiative, enunciated in the Declaration of New York of 10 September 1990, calls for world cooperation to develop new vaccines that can be given at earlier ages, are more effective, require fewer doses, can be administered orally, can be stored without refrigeration, and are cheaper. Work is proceeding in all these areas.

Question 8: What other benefits derive from EPI?

Immunization has significance for overall health far beyond curtailing contagious diseases. The programme has made health care available in small, remote villages for the first time in many countries. Infants and the members of a family accompanying them can receive general health care as well as supplements of vitamin A to help reduce mortality and prevent blindness, iodine to prevent goitre and mental retardation, *antibiotics to prevent pneumonia and dysentery, and anti-malarial treatment.*

Question 9: What are some of the problems encountered in expanding immunization?

Governments have had to expand health facilities and train health workers in remote areas, improve communications and establish means to maintain refrigeration of the vaccines at temperatures between 0 and 8 degrees Celsius (between 32 and 46 degrees Fahrenheit) to keep the vaccine effective. A precondition for expanding immunization is to create the demand among the people for such protection so they make certain their children are immunized. That has required mass social mobilization.

./.

Question 10: If you do succeed in saving 5 million lives a year, what then happens to the children? Do they just live on and grow up in poverty and misery or die a young death from other causes?

Immunization is only one of many measures necessary to improve the condition of children. The Declaration and Plan of Action approved at the World Summit for Children in September 1990 at the United Nations outlines many other goals to reach by the end of the century. Achievement of these goals will help millions of children to grow up healthy, strong and educated and thus better prepare them for a productive adulthood.

Question 11: Why are some of the immunization rates dropping in the industrialized world and what has been the impact of this decline? What is being done to counter this trend in the industrialized countries?

As formerly common diseases, such as measles, diphtheria and whooping cough have become rare in the developed countries, some parents have become apathetic about the need for immunization of their children. This has led to a recent upsurge in some of these diseases in the industrialized nations. Some industrialized countries have worked to counter this trend by using local vaccination days, working with medical and health societies to convince health workers to vaccinate all children who are not too ill to be hospitalized, and employing the mass media to raise awareness and create demand for immunization services.

Question 12: What factors were responsible for the dramatic increase in immunization coverage during the 1980s?

Immunization coverage increased nearly fourfold during the decade because of several factors: clear goals and a well-defined programme strategy were enunciated; immunization received a high political priority; the power of communications and wide-scale social mobilization was utilized; and support from local political leaders, religious leaders, teachers and mass movements strengthened demand for services and facilitated efficient delivery of immunization.

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

TOWARDS SUPER VACCINES FOR CHILDREN

The development of new and improved vaccines for children has become one of the hottest items on the child survival agenda for the 1990s. The world's leading scientific and medical research institutions, together with a number of private sector pharmaceutical laboratories, have joined forces with WHO, UNICEF, and other United Nations bodies in a global "Children's Vaccine Initiative", to develop a new generation of products which could overcome some of the logistical and other obstacles to the full immunization of children everywhere. Proposed new or improved vaccines, some of which are already in the pipeline, would:

* require one or two, rather than multiple doses;
* be given earlier in life;
* be combined in innovative ways to reduce the number of required injections or visits to clinics;
* retain their effectiveness under unstable temperature conditions during transportation and storage, especially in tropical climates;
* tackle a range of new diseases not currently targetted under the Expanded Programme of Immunization (EPI); and
* be affordable.

The ultimate dream, is a "one-shot" super vaccine which would protect children against multiple diseases with a single dose. The dividends on a one-shot vaccine could be enormous in terms of lives and financial resources saved.

Extraordinary Progress

Despite the logistical costs of vaccine delivery today and the complex arrangements which precede vaccination efforts in most countries, child immunization rates in the developing world reached an all time high in 1990 with 80% or more coverage of children by their first birthday against six child killer diseases - tuberculosis, measles, polio, diptheria, whooping cough, and tetanus. The Expanded Programme on Immunization effort, with its goal of Universal Child Immunization which lifted child immunization rates from around 20% in 1985, saved some 3 million lives from vaccine preventable diseases in 1990 alone.

Almost 2 million children a year continue to die, and many more remain unprotected, despite the immunization safety nets which have been erected. WHO estimates that an additional five to six million child lives are being lost each year to diseases which are not covered by the EPI. They include viral and bacterial diseases such as hepatitis A, C and E, rotavirus, dengue, meningococcal meningitis, acute respiratory infections, and bacterial diarrhoeas. Each might be prevented with vaccines which exist or could be developed with existing technologies. Many more lives could also be saved each year if there was an effective vaccine for malaria.

Complete protection against the six child killer diseases requires five contacts with a trained health care worker over a period of months - an obligation which many poor communities and their parents have had difficulty fulfilling. Some 15% of the children who are reached on the first round drop out before they are fully immunized.

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Children's Vaccine Initiative

On the eve of the World Summit for Children in 1990, WHO convened a meeting of 75 leading international scientists and public health officials to launch a special Children's Vaccine Initiative (CVI). The meeting, which was held in collaboration with UNICEF, urged national leaders, international agencies, private and voluntary groups, and commercial pharmaceutical laboratories to accelerate their efforts to develop vaccines for the special needs of children everywhere.

The CVI operates through an International Consultative Group for Vaccine Development which establishes priorities, exchanges information, and monitors and evaluates research results. The Group also helps to organize clinical trials of vaccines, mobilize resources and introduce new vaccines into national immunization programmes. The Group includes representatives from developing and industrialized countries, multilateral and bilateral development agencies, and the private sector.

The participants in the Initiative are outlining a plan of work designed to develop a new generation of products:

Single dose vaccines

The long-term goal of CVI is to minimize the number of vaccine doses needed, and to ultimately make one or a few "children's vaccines" containing many immunizing vaccines delivered in a single dose soon after birth. To the extent possible, injections would be replaced by doses given by mouth. These vaccines would replace vaccines (e.g. tetanus, diptheria, pertussis, polio, hepatitis B) that now require an initial dose and further boosters.

The WHO/UNDP Programme for Vaccine Development (PVD) has been supporting promising research on methods to encapsulate multiple vaccines into time-release, injectable microcapsules, made from biodegradable polymers such as those used for internal sutures during surgery. Microcapsules of different thickness or size release the entrapped vaccine(s) at different times after injection, and thus mimic repeated booster shots by delivering two or three pulses of vaccine(s) spaced over months. Administration by mouth may also be feasible.

The first one-shot, controlled-release vaccine is now being developed against tetanus. Immunization against tetanus currently requires three injections to prevent neonatal tetanus, which kills an estimated 565,000 newborns a year. Comparative animal testing of four candidate slow-release vaccines will start in summer 1991. Eventually the same technology will be applied to other vaccines which now require multiple shots.

Another promising research approach to develop a one-dose vaccine utilizes already available vaccines to carry or to "vector" several other vaccines. Existing viral or bacterial vaccines are employed as carriers to deliver a second or third unrelated vaccine which has been biochemically inserted into the carrier vaccine.

"Earlier in Life" vaccines

Work is underway to prepare measles vaccines which can be given to children at six months of age or earlier instead of nine months of age. In developing countries, many infants contract measles before reaching nine months of age, and the mortality rate is significantly higher.

./.

Improved heat-stable vaccines

Studies to improve the heat and genetic stability of polio vaccine virus are well advanced, and candidate vaccines are being evaluated in animal model systems and early human trials.

Oral vaccines

Work to convert injectable vaccines into a more convenient one-dose oral form is in the early stages of development. Current research is drawing on both the microencapsulation and live-vaccine carrier approaches.

New vaccines

A vaccine is under development against the mosquito-borne dengue virus. Japanese encephalitis (JE) is closely related to dengue, and most new information discovered during dengue vaccine studies has been quickly applied to JE. Research within the PVD has progressed to the candidate vaccine stage. New conjugated vaccines against meningococcal meningitis have been prepared by groups partially funded by the PVD and these have entered human trials. Substantial progress has also been made with vaccines for hepatitis A. A live-attenuated vaccine candidate for hepatitis A has completed animal studies and is entering the early phases of human safety trials.

A Cost-Effective Weapon

The development of new and improved vaccines is one of the most cost-effective weapons available to protect children against diseases. The high cost of medical infrastructures and an acute shortage of trained health personnel place therapy beyond the reach of all but a few. There are no useful drugs against viral diseases, and antibiotics are rarely available. In many developing areas it has also been difficult to prevent diseases through infrastructural and educational measures, such as improved sanitation, safe drinking water, or the control of mosquitoes and parasites.

New vaccines and immunization technologies could save governments and international agencies many millions of dollars a year. It costs $10 to $15 to fully immunize a child against the six child killer diseases, but only 14% of that is in the cost of the vaccines. The remainder is the cost of getting the vaccines to the communities.

Despite the logic of the vaccine approach to disease control, it remains difficult to focus the necessary financial, scientific and technological resources, which are available mostly to the industrialized world, on diseases which do not pose a direct threat to wealthier populations. The development of new vaccines and technologies is extraordinarily expensive and is largely in the hands of private sector pharmaceutical corporations which depend upon markets and profits for their survival. The markets for many urgently needed drugs today are limited, as is the capacity of poorer nations and their people to pay for medical protection and cures.

It is against this background that the Children's Vaccine Initiative is attempting to mobilize a new commitment and resources to protect children in the world's poorest and most vulnerable communities.

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

MILESTONES OF THE EXPANDED PROGRAMME ON IMMUNIZATION

Organization stage

1974 Expanded Programme on Immunization established by the World Health Assembly of the World Health Organization.

1974 Immunization coverage in the developing world estimated to be less than 5%

1975 Poliomyelitis is recognized to be a significant health problem in the developing countries

1976 EPI and the NBS, Sweden develop the first cold box for preserving vaccines in developing countries

1977 The goal of providing immunization for all children of the world is approved by the World Health Assembly

1977 First EPI training course launched in Kuala Lumpur, Malaysia

1978 Establishment by WHO, Geneva, of a group to work on developing the "Cold Chain", the "chain of refrigerators and cold boxes designed to protect heat-sensitive vaccines as they move from supplier to the health centres where they are administered.

Implementation stage

1980 People's Republic of China replans its immunization programme to follow EPI guidelines

1981 Acceleration of activities to prevent newborn tetanus after an international conference in Lahore, Pakistan

1982 EPI warns the World Health Assembly that the EPI goal will not be met unless the immunization programme can be accelerated

1982 UNICEF launches "Child Survival and Development Revolution" which focuses UNICEF support to immunization activities

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Acceleration stage

1983 Measles vaccine with improved heat stability introduced

1984 Immunization coverage estimated at 25%

1984 WHO, UNICEF, the World Bank, UNDP and the Rockefeller Foundation form the Task Force for Child Survival to help accelerate the EPI

1985 The Americas establish goal of poliomyelitis eradication by 1990

1985 UNICEF Executive Board and United Nations General Assembly affirm support to "Universal Child Immunization" by 1990

1985 Rotary International "Polio Plus" programme launched

1985 Vaccine prices reduced to less than 5 US Cents per dose

1986 Immunization coverage reaches 50%

1986 First design for a sterilizable plastic syringe produced by EPI

1986 African Immunization Year

Impact stage

1987 EPI introduces the first steam sterilized syringe designed for use in small health centres

1988 African region becomes the first region to pledge the elimination of newborn tetanus by 1995

1989 The World Health Assembly establishes disease reduction targets for the EPI: eradication of poliomyelitis, elimination of tetanus, reduction of measles

1989 EPI estimates that half the world's measles and whooping cough are being prevented by immunization

1989 Immunization coverage reaches 75%

Sustainability stage

1990 The American Region reports several months free of any poliomyelitis cases

1990 UNICEF buys more than 1000 million doses of vaccine for the first time. BCG, DPI, poliomyelitis and measles reach UCI goals of 80% coverage or more.

1990 Children's Vaccine Initiative was launched with the "Declaration of New York" and endorsed by World Summit for Children

---

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

IMMUNIZATION IN BANGLADESH

By the complex yardsticks used to monitor immunization rates, Bangladesh "failed" to reach its vaccination target for children in 1990.

But don't talk about failure to Abdul Karim and Harzan Begum, residents of the tiny, remote village of Madhabpur in northern Bangladesh. They are still rejoicing over their healthy daughter Rozina born last April after the earlier deaths of two infants from tetanus for lack of two shots costing just four cents.

Bangladesh is one of the great success stories of the Expanded Programme on Immunization designed to prevent six diseases that still kill 2.1 million children annually. In 1985, only one in 50 children under the age of one was vaccinated against measles, diphtheria, tetanus, whooping cough, polio and tuberculosis. By the end of 1990, more than three out of five infants were immunized and the country was well on the way to the target of 80% set for the developing world. In 1985, 64 000 infants were immunized in the country; in 1990, the total was approximately 2.35 million.

Rozina is just one of the products of this immunization revolution. Her parents had given up hope of ever having children surviving infancy because of the scourge of tetanus of the newborn. Medicine men had told the couple that they were "cursed" and "evil spirits" would always "steal" their babies.

Actually, tetanus of the newborn is difficult to eradicate since it is caused by unsterile practices at birth, like using unclean utensils, leading to infection of the umbilical cord which is usually fatal. But it is easily preventable through two shots administered to a woman during pregnancy.

Harzan Begum was skeptical when she was first told about the vaccination that would protect her newborn child and it took considerable convincing by Muzammel Haq, a health worker, and Shaikh Mujib, a volunteer in the immunization programme, to get her to take the shots.

Rozina was born on 9 April 1990, a lovely healthy girl who has since completed her immunization course. She is, in fact, an example to many others in the Rajshahi region who thought that medicine could not match the strength of traditional spirits. They now know that immunization saves lives.

As a result of this new-found knowledge, Rajshahi has the distinction of being the only one of Bangladesh's four regions to reach the 80% target.

Bangladesh began working in the late 1970s on the Expanded Programme on Immunization with the eventual goal of universal child immunization, buoyed by the eradication of smallpox from the country in 1977. Yet by 1985 the immunization rate was only 2% and only 22% of the population had access to health services.

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Recognizing that much more energy and funding were needed to achieve universal child immunization, the government mobilized resources domestically and obtained international assistance from the World Health Organization, the United Nations Children's Fund, the World Bank and other international agencies. Bilateral assistance was also received from agencies like the U.S. Agency for International Development and the Swedish International Development Agency. In addition, Rotary International was an active contributor. Total international assistance has been about $33 million since 1985, covering about 60% of the estimated $5.79 cost to immunize each child, with the national government paying for the remainder.

The programme was so successful that by early 1989 nearly all the population had access to immunization, often through services offered at makeshift, temporary sites. The critical part of the expansion was the establishment of "outreach sites" in homes, schools and community centres so that no one would have to travel more than two kilometers to be vaccinated. These sites, with their bright yellow and red signs, represent an opportunity to expand public health services throughout the country. Madhabpur, where Rozina and her parents live, still has no health centre but the outreach sites made available health services previously unknown to the villagers.

The expansion was built on the existing programmes in the Ministry of Health and Family Welfare. Health assistants and family planning workers of the ministry formed teams. Using family planning personnel was a two-sided benefit. It gave the immunization programme access to women, the key to improving child health; and the life-saving aspects of vaccination gave new respectability to family planning personnel since the workers were seen as preventing child deaths, rather than just counselling against having additional children, an unpopular message.

From the office of the President down to the smallest government subdivision and hamlet officials were sensitized to support the expanded programme on immunization which now operates in all 460 subdistricts of Bangladesh.

Among the services developed was a "cold chain" to keep the vaccines at the required temperature of 4 to 8 degrees Celsius (40 to 46 degrees Fahrenheit). Cold chain "runners" equipped with ice travel by bicycle and rickshaw to isolated parts of the country to deliver the vaccines.

In all, an "army" of about 53 000 people were trained in immunization practices at no great cost to the government since they were already employees of the health system.

With the facilities and training in place, a massive mobilization plan was undertaken to convince families to have their children immunized. Some 50 000 volunteers were trained to help this process. the alliance of organizations was the widest ever formed for a single social programme in the country: politicians, teachers, students, religious leaders, mass and local media, professional organizations, voluntary groups, the business community and many ordinary people joined together to inform the public about the importance of immunizing all children.

A popular logo built around the word "moni" meaning a child of either sex in the Bengali language, gave the programme a strong visual identity. It has been stenciled and painted on walls, displayed on signs, banners, tin plates and bumper stickers, printed on T-shirts, rickshaws, commercial products and a multitude of communications materials. National radio and television also tuned in to the immunization programme, airing free promotional spots.

Bangladesh still has some way to go before the entire country can claim the success of the Rajshahi region in reaching the 80% target for 1990. But the cheery visage of Rozina Karim stands as a vibrant symbol of just how significant the Expanded Programme on Immunization can be for families in Bangladesh.

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

IMMUNIZATION IN BOTSWANA

Africa has probably faced the most daunting task in protecting its children through immunization. Most countries on the continent lack well developed health facilities and trained health workers and have difficulties in providing health services to large numbers of people in remote areas.

As a result the continent's health ministers set the 1990 immunization target for children under one at 75%, rather than 80% in most of the rest of the developing world.

Botswana reached the 75% goal in 1987, one of the first African countries to do so, and has successfully maintained this achievement.

One of the main reasons for the success was the employment of a decentralized, grass-roots approach to immunization. All of the more than 200 villages in the country carried out door-to-door campaigns to make certain children were immunized. Almost 25 000 school children, nearly 2% of Botswana's total population of 1.3 million people, visited residences throughout the country on weekends to survey the immunization needs of infants and to make certain that parents took their children to health centres to be immunized.

Each village in the vast country designed its own programme to allow for specific community needs, taking advantage of the decentralized government structure in the southern African nation. There was greater dynamism in spreading the immunization message since the programme sprang from the local community, rather than coming from the distant capital. In addition, the central government gave strong political support to the immunization drive.

Emphasis was placed on person-to-person, traditional communications channels in each village or settlement, rather than mounting a single, major nationwide campaign. instead, immunization workers button-holed families at public meetings, in churches and at cultural performances in cities, towns and tiny villages to get the immunization message across.

As a result of the successful immunization drive, there has been a sharp decline in the number of children suffering from the six leading vaccine-preventable diseases - measles, diphtheria, whooping cough, tetanus, polio and tuberculosis. In 1989, no cases of tetanus of the newborn or diphtheria were reported and there was only one case of polio and five of whooping cough. Measles was still a problem as was tuberculosis, although rates among children had declined sharply.

Immunization is expensive in Botswana because of the sparse population distribution. Even though the cost of the complete series of vaccines is less than $1, the total cost of storing the doses, delivering them to the communities and administering them is about $32, more than twice the $13 average throughout the developing world.

./.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Donor contributions from the international community have accounted for about one-third of the cost with the remainder coming from the Government and voluntary contributions. Starting in 1991, however, the Botswana government is taking responsibility for the entire cost of the vaccines and the required equipment, including refrigeration to keep the vaccines viable while being transported and stored.

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

IMMUNIZATION IN EL SALVADOR

El Salvador had to overcome civil war and widespread fear of violence to reach its goal of immunizing 80% of under one-year olds against the leading vaccine-preventable diseases.

The embattled Central American country accomplished this feat partly by bringing a novel experiment to the history of warfare - "days of tranquility" for the benefit of children. In 1985, El Salvador became the first country to suspend a civil war for the purpose of respecting the right of its children to be immunized.

Since then the country has continued to have days of tranquility each year so that children can be vaccinated in areas where the war prevents access by health workers. At first, health workers were afraid to participate for fear of violence; by 1990 they volunteered to go. Two different Salvadoran ministers of health, one a colonel, have also taken part, using the occasion to socialize a bit with their adversaries.

A total of more than 3 million doses of vaccine have been administered during the six-year-old programme. It reached the peak of success in 1988 when 400 000 children were immunized in one day, more than half the total number of children under school age in the country.

There were three days of tranquillity each year from 1985 through 1989, and two each year in 1990 and 1991. The need for cease-fire days to carry out vaccinations had decreased as a number of international organizations and nongovernmental organizations have increased their immunization work in guerrilla-controlled areas.

The first cease-fire day in January 1985 was preceded by three months of separate contacts with the Government in San Salvador by UNICEF and the Salvadoran guerrillas in their headquarters in Mexico, utilizing the services of the Catholic Church. It took 15 days to arrange the second immunization day for the following month and a week for the third in April. By 1990, all the arrangements were carried out by overnight fax messages.

When the experiment began, the immunization rate was abysmally low for the six diseases - measles, diphtheria, tetanus, whooping cough, polio and tuberculosis. The highest rate of immunization for any disease was for polio at 30%. After the first campaign it reached 50%. By September 1990, El Salvador had passed the 80% rate for all six diseases.

Although each side accused the other of violating the one-day cease-fires, there has been only one recorded casualty linked to the days of tranquility, the wounding of a pregnant woman in 1989.

War, however, has its own driving force. Each day of tranquility was designed to last from 7 a.m. to 6 p.m. On the dot of 6 p.m., the shooting would resume.

The objective was vaccination, nothing else. That accomplished, for one day, it was back to war again.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

IMMUNIZATION IN THE ISLAMIC REPUBLIC OF IRAN

An immunization programme review carried out by national authorities in 1984 jointly sponsored by WHO and UNICEF showed that less than 30% of children were fully immunized before their first birthday. A national strategy was adopted to accelerate programme activities through mass-campaigns, sustained by routine immunization and primary health care, integrated delivery systems using trained family health workers in urban health centres and community health workers in rural health houses. Meanwhile, mobile teams were established to provide regular EPI services at health posts in villages and remote areas not yet covered by the national PHC system. Periodic national cluster surveys were conducted to evaluate and revalidate achievement of the programme.

Addressing specific disease problems, comprehensive national plans of action within the overall framework of immunization, maternal and child health programmes and primary health care have also been developed and implementation started, for the eradication of polio (1989) and the elimination of neonatal tetanus (1990). A national network of laboratory support services for polio eradication is being established. The manual for health workers on polio eradication in Persian language is being printed.

A WHO sponsored demonstration project to include Hepatitis-B vaccination into the routine national immunization programme established in 1990, is now progressing well.

Firm commitment from the Government towards self-reliance of the programme is strongly visible. In spite of constraints faced due to war, the annual national budget allocation for EPI is considered as one of the highest in the Eastern Mediterranean Region. A total of $12.5 million from national resources have been allocated every year for the programme since 1984, mainly for procurement of cold chain equipment, vehicles, mobile teams, strengthening of vaccine production, training activities and provision of training material.

A national committee for EPI comprised of advisors to the Minister of Health, Under-Secretaries for administration and finance, all Directors General, is functioning effectively to periodically review progress and formulate strategies as appropriate. Focus of programme activities is now given to identify groups/areas, with low coverage, to ensure that high quality immunization coverage is sustained in all sectors of the community, and strengthening of a nationwide disease surveillance system.

The programme continues to achieve a high level of immunization coverage among infants, reaching in 1989 a coverage of 90% for BCG, 89% for DPT3/OPV3 and 89% for measles. Preliminary reports for 1990 strongly indicate that these coverages were at least sustained if not increased as shown in Annex I.

Although, in general, lots of improvements are required for the disease surveillance mechanism to routinely monitor the impact of the programme, available data indicate that over the past (3-5>) years, there has been a demonstrable consistent reduction trend in the annual number of reported cases of all EPI target diseases in spite of the fact that the disease reporting system has improved over the years.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

IMMUNIZATION IN THE ISLAMIC REPUBLIC OF IRAN

An immunization programme review carried out by national authorities in 1984 jointly sponsored by WHO and UNICEF showed that less than 30% of children were fully immunized before their first birthday. A national strategy was adopted to accelerate programme activities through mass-campaigns, sustained by routine immunization and primary health care, integrated delivery systems using trained family health workers in urban health centres and community health workers in rural health houses. Meanwhile, mobile teams were established to provide regular EPI services at health posts in villages and remote areas not yet covered by the national PHC system. Periodic national cluster surveys were conducted to evaluate and revalidate achievement of the programme.

Addressing specific disease problems, comprehensive national plans of action within the overall framework of immunization, maternal and child health programmes and primary health care have also been developed and implementation started, for the eradication of polio (1989) and the elimination of neonatal tetanus (1990). A national network of laboratory support services for polio eradication is being established. The manual for health workers on polio eradication in Persian language is being printed.

A WHO sponsored demonstration project to include Hepatitis-B vaccination into the routine national immunization programme established in 1990, is now progressing well.

Firm commitment from the Government towards self-reliance of the programme is strongly visible. In spite of constraints faced due to war, the annual national budget allocation for EPI is considered as one of the highest in the Eastern Mediterranean Region. A total of $12.5 million from national resources have been allocated every year for the programme since 1984, mainly for procurement of cold chain equipment, vehicles, mobile teams, strengthening of vaccine production, training activities and provision of training material.

A national committee for EPI comprised of advisors to the Minister of Health, Under-Secretaries for administration and finance, all Directors General, is functioning effectively to periodically review progress and formulate strategies as appropriate. Focus of programme activities is now given to identify groups/areas, with low coverage, to ensure that high quality immunization coverage is sustained in all sectors of the community, and strengthening of a nationwide disease surveillance system.

The programme continues to achieve a high level of immunization coverage among infants, reaching in 1989 a coverage of 90% for BCG, 89% for DPT3/OPV3 and 89% for measles. Preliminary reports for 1990 strongly indicate that these coverages were at least sustained if not increased as shown in Annex I.

Although, in general, lots of improvements are required for the disease surveillance mechanism to routinely monitor the impact of the programme, available data indicate that over the past (3-5>) years, there has been a demonstrable consistent reduction trend in the annual number of reported cases of all EPI target diseases in spite of the fact that the disease reporting system has improved over the years.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

CHILDHOOD IMMUNIZATION IN THE UNITED STATES

The United States Immunization Programme has been one of the most successful disease prevention efforts. Ninety percent or greater reductions from reported peak incidence have been achieved for measles, mumps, rubella, congenital rubella syndrome, diphtheria, tetanus, pertussis, and polio. The last documented case of indigenously acquired polio caused by wild polio virus was detected in 1979.

Starting in late 1990, conjugated vaccines against Haemophilus influenzae type b were added to the infant immunization schedule. These vaccines should help prevent the 18 000 to 20 000 cases and 900 to 1000 deaths annually from this agent that would occur in the absence of a vaccination programme.

The success of the programme is due to high immunization levels achieved prior to or at the time of school entry. Beginning in 1977, the United States began a Child Immunization Initiative with the goal of achieving 90% immunization coverage in the nation's children. An important component of this initiative was the enactment and enforcement of school immunization laws requiring immunization for school attendance. Currently all 50 states and the District of Columbia have laws requiring immunization to enter school.

Since the 1981-1982 school year, 95% or more of all school enterers have been immunized against the seven diseases noted above. Between 1981 and 1990, an estimated 22.5 million cases of measles were prevented which would have resulted in 6 700 cases of retardation, and 2 250 deaths.

Yet despite the success of the programme, unacceptable morbidity and mortality are still occurring from vaccine preventable diseases. During 1989 over 18 000 cases of measles were reported; this increased to over 26 000 cases in 1990, the highest number since 1978. The number of suspected measles related deaths was the greatest number since 1971.

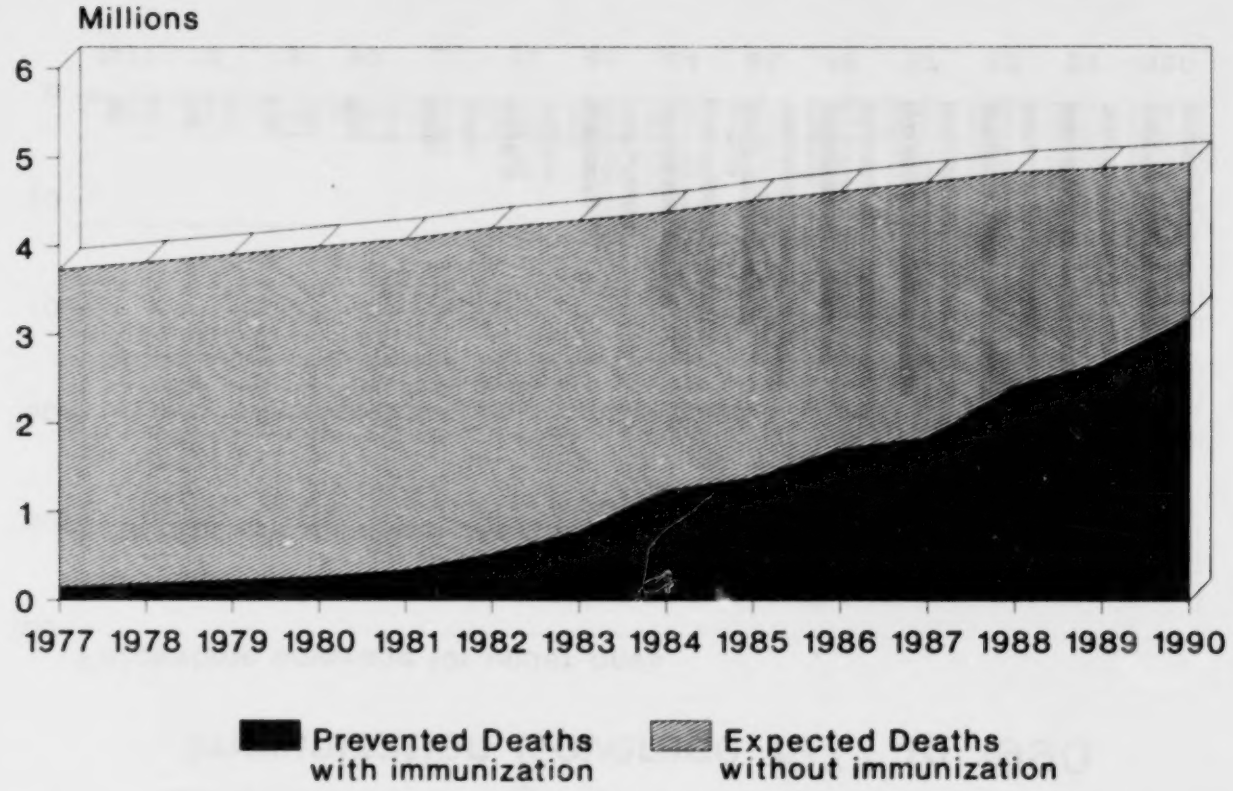
The major cause of the epidemic appears to be failure to deliver vaccine to preschool children at the recommended ages, particularly those residing in inner city areas. Minority children are disproportionately affected. A recent review by the National Vaccine Advisory Committee concluded that the healthcare delivery system itself bore substantial responsibility for the problems in vaccinating preschool children.

Many opportunities for vaccination are missed and parents seeking immunization must often overcome obstacles to immunization such as requirements for comprehensive physical examinations when such examinations are not available for weeks to months. Future efforts will be directed toward taking advantage of all opportunities and decreasing the obstacles to assure our children receive vaccines at the appropriate ages.

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

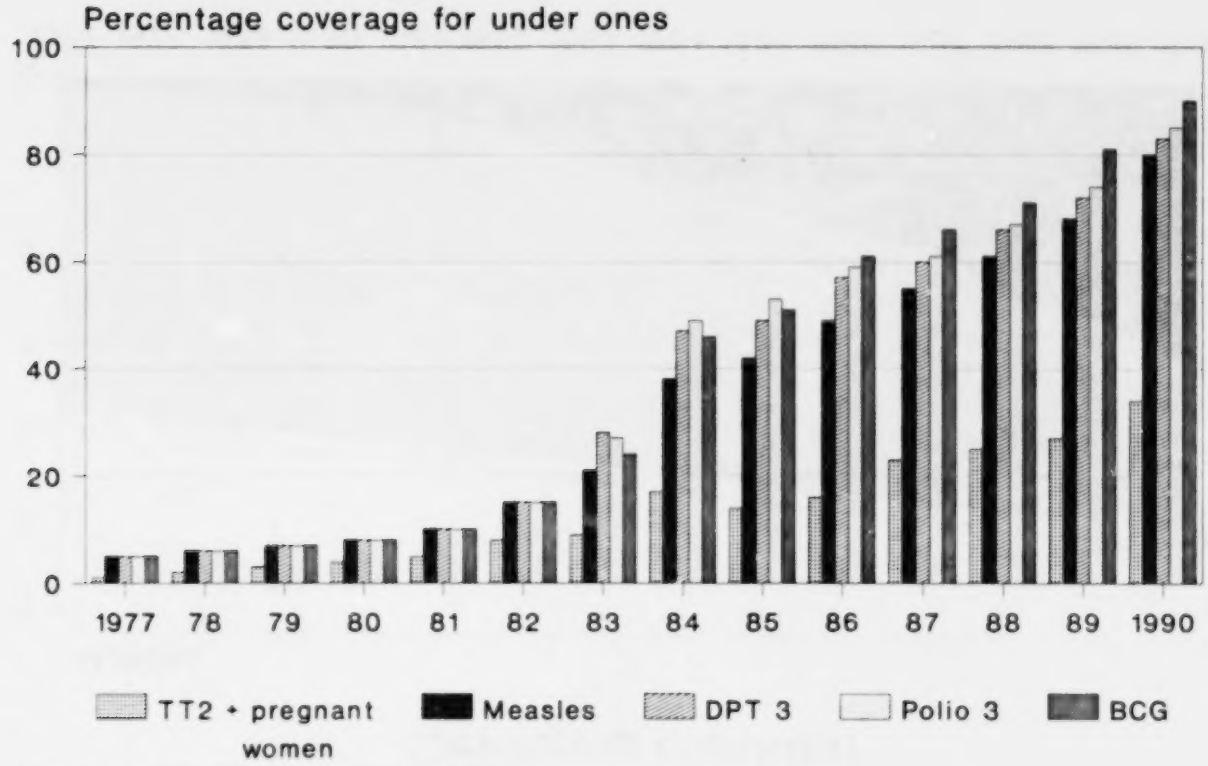
UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

Expected Deaths due to EPI Diseases
(Developing countries)

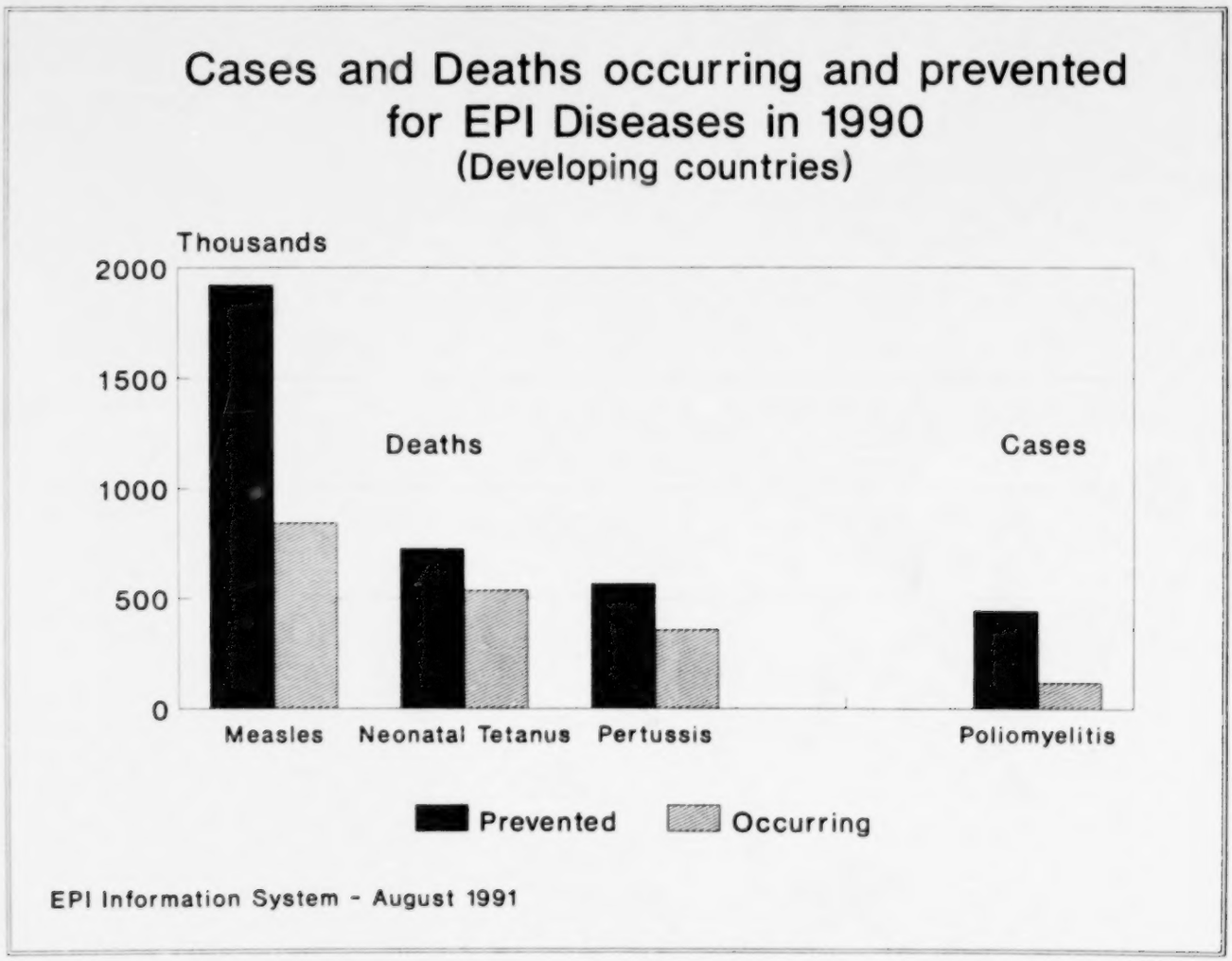


Source : WHO estimates

Expanded Programme on Immunization
Immunization Coverage 1977 to 1990



Global data from EPI Information System
August 1991


Cases and Deaths occurring and prevented
for EPI Diseases in 1990
(Developing countries)
Thousands
2000
1500
1000
500
0
Deaths
Cases
Measles
Neonatal Tetanus
Pertussis
Poliomyelitis
Prevented
Occurring
EPI Information System - August 1991

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La inmunización de los niños: un logro mundial

How to Order
Black and white prints, 13 x 18 cms in size (5 x 7 inches), are available for publication or exhibit purposes from WHO or UNICEF. Credit must be given.

Important note for editors:
These photographs have been printed in a coarse screen to allow for direct dot-for-dot (line) reproduction by local printers.

Commandes
Les photographies noir blanc, format 13 x 18 cm, sont disponibles aux fins de publication et d'exposition auprès de l'OMS ou de l'UNICEF. Mention doit être faite de leur origine.

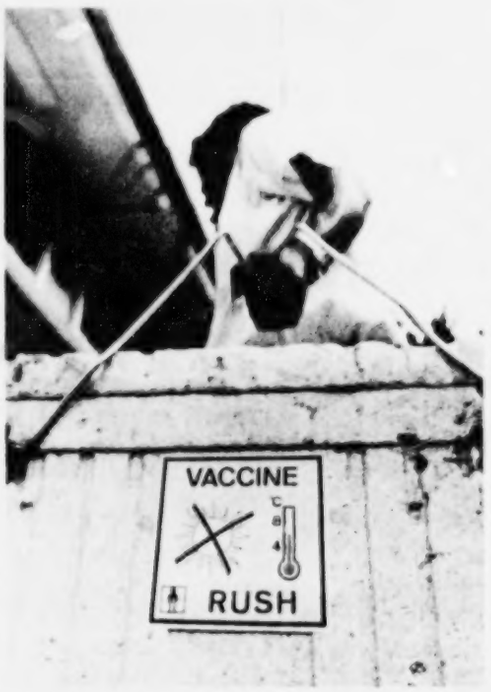
Note importante à l'intention des rédacteurs:
Ces photos ont été imprimées en trame très ouverte afin de permettre leur reproduction directe au trait par votre propre service d'impression.

Pedidos
Con fines de publicación y exposición pueden pedirse a la OMS o al UNICEF las fotografías en blanco y negro, de 13 x 18 cm. Habrá de mencionarse la procedencia.

Nota importante para los redactores:
Estas fotos se han impreso en trama muy abierta para que su servicio de imprenta pueda reproducirlas directamente.

An infant in Kenya receives a life saving jab. *WHO/20052/J Schytte*
Un enfant du Kénya reçoit une piqûre qui pourrait lui sauver la vie.
Un lactante de Kenya recibe una inyección que puede salvarle la vida.

Preparing the vaccine shot in India. *WHO/20516/J Schytte*
Préparation d'une injection de vaccin en Inde.
Preparando la administración de la vacuna en la India.



Delivering vaccine via the "cold chain" in the Philippines.
Les vaccins acheminés par la "chaîne du froid" aux Philippines.
Entrega de vacunas a través de la "cadena de frío", en Filipinas.
WHO/20352/Zafar

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

UNICEF/3508/90/C. Watson

A child in Sierra Leone receives vaccine vital to its survival.
Un enfant de Sierra Leone reçoit un vaccin vital pour sa survie.
Un niño de Sierra Leona recibe una vacuna vital para su supervivencia.

Village doctor administers vaccines in Guijia, Peoples Republic of China. UNICEF/2262/86/S. Sprague
Un médecin de village en train de vacciner à Guijia, en République Populaire de Chine.
Un médico de aldea en Guijia (República Popular de China) administra vacunas.

Childhood immunization: a global achievement

La vaccination des enfants: une réussite mondiale

La immunización de los niños: un logro mundial

Administering vaccine in Algeria. UNICEF/4210/90/S. Sprague
Vaccination en Algérie.
Administración de vacunas en Argelia

WHO Office of Information
1211 Geneva 27, Switzerland
Telephone 791 21 11; Fax 791 07 46;
Telex 415416 UNISANTE GENEVA

UNICEF Division of Information
New York NY 10017, USA
Telephone 212 326 7010; Fax 212 326 7768
Telex 239 521 UNICEF NEWYORK

EPI UPDATE

AUGUST 1991

EPI FOR THE 1990's – THE CHALLENGES

Immunization is the right of **all** children and women to protect them against vaccine preventable diseases. To this end, the Expanded Programme on Immunization (EPI) is facing exciting challenges in the decade of the 1990's to:

- Achieve and sustain full immunization coverage in all countries
- Eradicate poliomyelitis
- Eliminate neonatal tetanus
- Dramatically reduce measles cases and deaths
- Measure the impact of immunization by improved surveillance
- Introduce new and improved vaccines as they become available for public health use
- Promote other primary health care actions using immunization contacts, including reaching vulnerable children with vitamin A and iodine supplementation
- Meet these challenges through research and development

EXPANDED PROGRAMME ON IMMUZATION OF THE WORLD HEALTH ORGANIZATION
IN COLLABORATION WITH THE UNITED NATIONS CHILDREN'S FUND

UP TO DATE

Worldwide achievements of immunization

In the 15 years since the EPI began, the overall immunization coverage rate for children in the developing world has risen from under 5% to 80%. Almost all countries of the world now provide immunization services for these six current target diseases:

- diphtheria
- measles
- poliomyelitis
- tetanus
- tuberculosis
- whooping cough

Providing these immunization services results in over 500 million health contacts each year, which also help in the delivery of other health initiatives for the benefit of women and children.

But there is still a long way to go. The world continues to under-use the most cost-effective public health intervention – immunization. It is profoundly tragic that over one and a half million children still die each year from these diseases for which there are available vaccines at low cost – and at least 119,000 fall victim to paralytic polio, all of which could have been prevented by immunization.

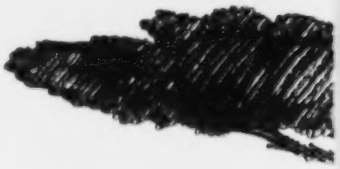
OF CHILDREN IN THE DEVELOPING WORLD ARE IMMUNIZED

Prospects for the future

It is crucial that the gains that have been made are sustained and immunization coverage is raised to targeted levels in all countries and in all communities.

Political support at the highest level is essential for this process. Guided by the goals and priorities of the World Health Assembly, the EPI has established detailed policies and strategies through the WHO Global Advisory Group.

These policies have included the stimulation and coordination of research and development, the production of training and learning materials and the development of training courses. Emphasis has also been placed on monitoring and evaluation, the gathering and disseminating of information, the provision of crucial public health communications, and the provision of technical assistance to national EPI programmes. All this requires resources, and WHO and UNICEF take a major role in the coordination of the international alliance of involved organizations, agencies and donors.



Immu
all

FOR THE 1990's

Health Ministers and Heads of State encourage EPI to new heights in the 1990's

In May 1989, the Forty-Second World Health Assembly set an ambitious agenda for the EPI in the 1990's:

- achieving and sustaining in all countries full immunization coverage with all the antigens used by the EPI (with a target to achieve 90% immunization coverage by the year 2000);
- controlling the target diseases, including the global eradication of poliomyelitis by the year 2000, the reduction of measles by 90% compared with pre-immunization levels, and the elimination of neonatal tetanus by 1995;
- improving surveillance to provide accurate assessment of the progress of the programme;
- introducing new or improved vaccines as these become available for public health use;
- promoting other primary health care practices which are appropriate for the programme's delivery system;
- research and development in support of the above.

TARGET

IMMUNIZATION COVERAGE BY THE YEAR 2000

ization – the right of
hildren and women

WORLD SUMMIT FOR CHILDREN

The EPI goals were endorsed by Heads of State and other world leaders who met in the remarkable **World Summit for Children** in September 1990. This resulted in **the World Declaration on the Survival, Protection and Development of Children and Plan of Action for Implementing the World Declaration.**

"Each country is urged to re-examine in the context of its particular national situation, its current national budget, and in the case of donor countries, their development assistance budgets, to ensure that programmes aimed at the achievement of goals for the survival, protection and development of children will have a priority when resources are allocated."

Objectives for the decade of the 1990's

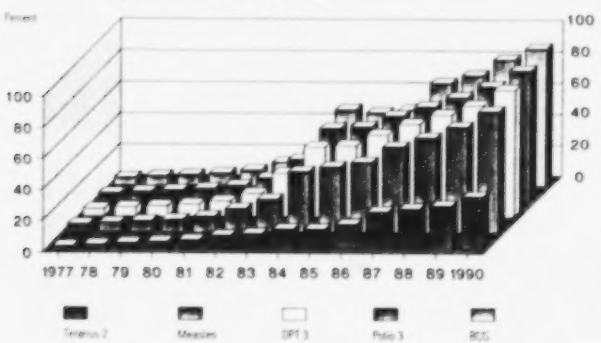
The EPI accepts the challenges of the World Health Assembly (above). The overriding concern of the programme continues to be sustaining and extending immunization services. The aim is to reach **all** children and women of child-bearing age in the world to raise immunization coverage levels to 90% or higher by the year 2000. High and uniform levels of immunization coverage provide the foundation on which specific efforts at disease control can be achieved. To meet these challenges of the 1990's, some of the key activities will be to:

- develop surveillance to ensure epidemiologically sound policies for disease reduction
- strengthen programme planning and management
- develop training programmes and materials
- educate communities to be involved in the process of immunization
- improve methods and materials for cold chain and logistics
- immunize the urban poor
- capture the imagination and support of donors and governments to ensure the long term sustainability of EPI as part of primary health care
- eliminate neonatal tetanus by 1995
- reduce by 95% measles deaths and reduce by 90% measles cases compared to pre-immunization levels by 1995
- eradicate poliomyelitis by the year 2000
- introduce new or improved vaccines for regular use, as they become available and affordable
- provide Vitamin A and iodine supplementation where appropriate
- develop and refine methods of assessing the quality of care in immunization services
- attract external support to programmes in need

REDUCE BY

MEASLES DEATHS

Immunization coverage for children under one year of age



TECHNOLOGIES

New decade, new vaccines

Hepatitis B, yellow fever and Japanese encephalitis vaccines are already being used in many programmes where these diseases are a public health problem. These and other vaccines must now be made available to people who continue to succumb to preventable infectious diseases. Many of these new vaccines are still too expensive for most countries to adopt into their regular programmes – others need further development.

Some organisms against which additional vaccines may be added to the EPI over the next decade:

- Malaria
- Yellow fever
- Pneumococcus
- Meningococcus
- Hepatitis A
- AIDS
- Dengue fever
- Haemophillus Influenzae B
- Japanese Encephalitis B
- Diarrhoeal disease e.g. Rotavirus
- Respiratory diseases e.g. RSV

Up to date technologies

Vaccines such as DPT, OPV and tetanus toxoid need to be given in three or more doses to provide lasting immunity. Research is under way to explore preparations of these vaccines which could be given as one dose but have a sustained release so that it would have a similar immunogenic effect to the multiple doses presently required.

Exciting developments in syringe design mean there will soon be available a syringe which can be used only once, thereby preventing spread of disease from the re-use of disposable equipment.

In the cold chain, new ways of providing power are being explored. Solar power is already a viable alternative for many developing countries.

FOR THE 1990's

Research for action

EPI is driven by the need to increase coverage to further reduce disease incidence. In the past few years it has become clear, however, that blocks to progress exist which need careful research. The EPI Research and Development Group has guided research in subjects such as the formulation of polio vaccine, the administration of measles vaccine at earlier ages and by alternative routes, auto-destruct syringe technology and delayed release vaccine preparations. The Children's Vaccines Initiative calls for new and better vaccines, benefiting children in all countries and making immunization easier, safer and less expensive.

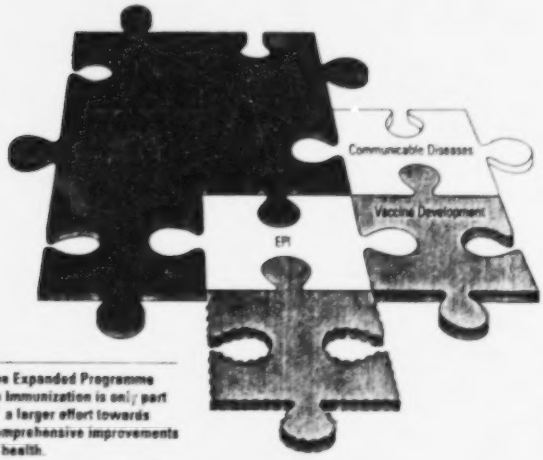
THE CHILDREN'S VACCINE INITIATIVE CALLS FOR VACCINES WHICH:

- require only one or two doses
- can be given earlier in life
- can be combined in new ways, reducing the overall number of injections or visits required;
- are more heat stable, retaining potency during transport and storage, particularly at tropical temperatures;
- are effective against a wide variety of diseases not currently targeted by immunization but which take a heavy toll of deaths, including AIDS, acute respiratory infections, diarrhoea and important parasites;
- are affordable.

Many more breakthroughs are hoped for in this way, paving the way to a single children's vaccine.

Gathering information globally

EPI has moved dramatically into the electronic age with the installation of computers and the development of computer programmes to assist in collection of surveillance data and cost information. Many countries have installed systems using EPI software. It is intended that information will ultimately be collected electronically at the national, regional and global levels.



The Expanded Programme on Immunization is only part of a larger effort towards comprehensive improvements in health.

PARTNERS IN EPI

To date, the global EPI effort has been supported by a range of partners such as WHO, UNICEF, UNDP, Rockefeller Foundation, Rotary International, Australia, Canada, Denmark, Finland, Japan, Netherlands, Norway, Sweden, United Kingdom, United States and many other bilateral donors. But the majority of commitment and support has come from each individual country which has created its own immunization programme and committed resources to make it work. Support from donors will continue to be needed for many countries for the coming decade, as the partners in EPI take on the challenge of improving countries' capabilities in primary health care with special emphasis on disease reduction, elimination and, in the case of poliomyelitis, eradication.

By far the largest and heaviest share of the burden of immunization for the coming decade will be borne by the recurrent budgets of the countries. Many have already accepted the challenge of preserving the funding of their national immunization programmes in the face of overall budget cuts. But the majority of developing countries cannot anticipate any real growth in their budgets for immunization. The cooperation of international development agencies will be required for any increases, especially those connected with the introduction of new vaccines.

For citation: EPI UPDATE 18, 1991, Rev. 1 (91/8781)

The support of UNDP in the production of this edition of UPDATE is gratefully acknowledged.